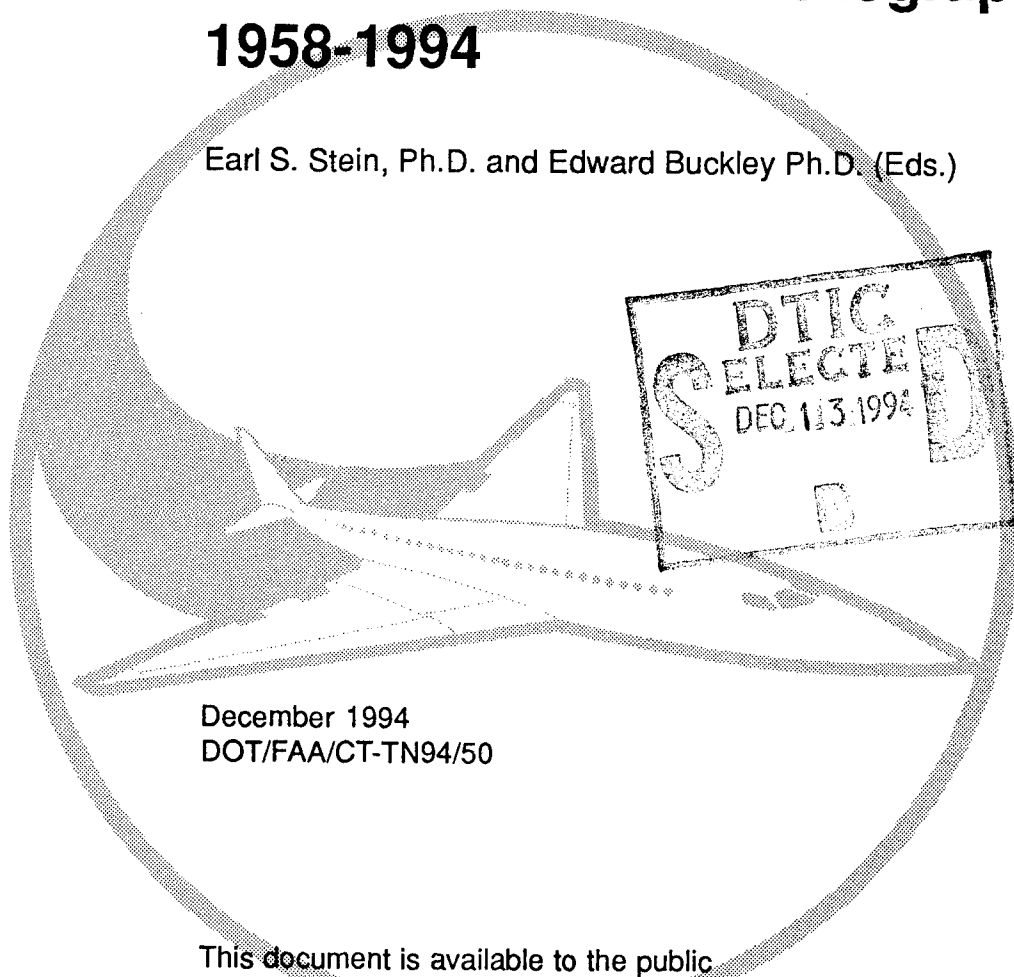


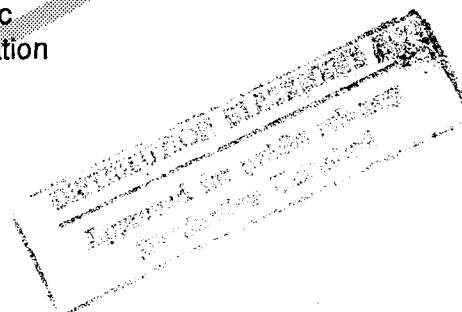
Human Factors at the FAA Technical Center: Bibliography 1958-1994

Earl S. Stein, Ph.D. and Edward Buckley Ph.D. (Eds.)



December 1994
DOT/FAA/CT-TN94/50

This document is available to the public
through the National Technical Information
Service, Springfield, Virginia 22161



U.S. Department of Transportation
Federal Aviation Administration
Technical Center
Atlantic City Airport, NJ 08405

19941206 064

NOTICE

This document is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The United States Government assumes no liability for the contents or use thereof.

The United States Government does not endorse products or manufacturers. Trade or manufacturers' names appear herein solely because they are considered essential to the objective of this report.

1. Report No. DOT/FAA/CT-TN94/50	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle Human Factors at the FAA Technical Center: Bibliography 1958-1994		5. Report Date December 1994	6. Performing Organization Code ACD-350
		8. Performing Organization Report No. DOT/FAA/CT-TN94/50	
7. Author(s) Earl S. Stein, Ph.D. and Edward Buckley, Ph.D., ACD-350, and Kathy Mann, PERI (Eds.)		10. Work Unit No. (TRAIS)	
9. Performing Organization Name and Address Federal Aviation Administration Technical Center Atlantic City International Airport, NJ 08405		11. Contract or Grant No. F2202J	
		13. Type of Report and Period Covered Technical Note December 1993 - December 1994	
12. Sponsoring Agency Name and Address		14. Sponsoring Agency Code	
15. Supplementary Notes			
16. Abstract <p>Since the Federal Aviation Administration (FAA) arrived in Atlantic City in 1958, there have been ongoing efforts in aviation human factors. These efforts have taken many forms and have focused on both the ground and air sides of the airspace system. Psychologists, engineers, systems analysts, computer scientists, and others have participated in the studies that have led to the numerous reports and papers cited in this bibliography. While this listing is probably not all inclusive, it covers virtually all work that is referenced in automated data bases plus publications that were identified by current and past researchers, but which never made it to the computerized listings.</p> <p>This bibliography is meant to highlight the work that has gone on over the years. While many of the documents cited are still available from the Technical Center library, or from the authors themselves, the editors do not suggest that everything is retrievable, and, in fact, much of the older work has been superseded by more modern technology and thinking. The research of 30 years ago has served as a foundation for the human factors engineering that is being done today.</p> <p>The references are provided in alphabetical order and indexed by numbers associated with subject matter categories.</p> <p>Human factors research is alive and continues to progress in the FAA and at the Technical Center.</p> <p style="text-align: right;">DTIC QUALITY INSPECTED 8</p>			
17. Key Words Human Factors, Aviation Human Factors, Man Machine Interface (MMI), Air Traffic Control, Controller Performance, Simulation, Pilot Performance		18. Distribution Statement This document is available to the public through the National Technical Information Service, Springfield, Virginia 22161	
20. Security Classif. (of this page) Unclassified	19. Security Classif. (of this report) Unclassified	21. No. of Pages 46	22. Price

INTRODUCTION

The purpose of this bibliography is to provide a listing of all human factors-related publications accomplished by, or under the direction of, the Federal Aviation Administration (FAA) Technical Center since its formation at Atlantic City International Airport in 1958.

Although this is a small community of human factors researchers, in an environment that has had relatively little turnover, researchers have not always been aware of the individual work of others and of what had been done before. While it is standard practice to begin a new project by initiating a literature search, not everything accomplished becomes stored in the various data bases that exist for government publications, psychology, and human factors. Much of this work was done for specific projects and, unfortunately, was not widely disseminated.

If researchers in this rather small community are not aware of everything that has gone on for the past 25 years, it could hardly be expected that human factors personnel outside of the Technical Center, and those with human factors issues to resolve, would know about the body of research conducted at the Technical Center.

The purpose of this publication was to assemble a bibliography of this material and couple it with a referencing system. This referencing system would facilitate looking up the complete American Psychological Association (APA) format citation for anything published or presented (and published in a proceedings) with a human factors content. Only documents that were published in some form or the other were selected for this listing.

METHOD

The process of gathering this information was more complicated than might have been anticipated. This was due, in part, to the nature of the work at the Technical Center, and, in part to the fact that some of what is done is not stored in any data base.

The initial step involved contacting all current human factors researchers still employed by the FAA who have ever worked at the Technical Center. A personal bibliography of work they had completed or knew was done for the Technical Center was requested. Surprisingly, the response often lacked key parts of one or more references for a complete APA citation. These were returned with a request for the retrieval of the necessary information, i.e., report numbers and volume numbers of a proceeding. All information that was available from any source is included here.

While there had been previous computerized literature searches of all reports accomplished at the Technical Center, it was decided to try again with a focus on human factors and related disciplines. The following search strategy was accomplished using the key words below:

FAA Technical Center, DOT/FAA Technical Center, NAFEC, or
National Aviation Facilities Experimentation Facility,

and

Human Factors, human factors engineering, aviation human factors, workload, performance, human error, ergonomics, attention, vision, visual, hearing, human behavior, visual displays, vigilance, monitoring, target acquisition or human.

While it was recognized that this was not an all inclusive list, it was hoped that it would produce additional references from those cited by the authors themselves. This search did find some additional citations from those provided by current Technical Center human factors personnel.

References in the bibliography are included in as complete a form as possible based on the information provided by the literature searches and authors. In terms of author-supplied information, there are some missing data fields where memory has failed and documentation has been incomplete.

The editors of this bibliography make no claim to the accessibility of the documents at the Technical Center. The purpose of the bibliography was to provide as broad a listing as possible. This listing shows the nature and breadth of the work that has been conducted by the Technical Center over the years.

The reader will find that some of the documents may be more accessible than others. What follows is a brief guideline on this accessibility.

Documents with FAA report numbers, which may take the form of "DOT/FAA", "RD", "FAA/BRD", "FAA/ARDS", or "FAA/NA", may be accessed through the library at the Technical Center or the library at FAA headquarters in Washington, DC. Those with an NTIS number will be on file with the National Technical Information Service in Alexandria, VA. Articles published in journals can be acquired through interlibrary loan from any library that offers that service. To acquire any documents not covered by one of the groups already cited, it is suggested that the researcher write the author, in care of the Technical Center. If that does not succeed, the senior editor of the this bibliography will make every effort to help acquire the document, if it still exists.

The index which follows the reference list was constructed based on the list itself. The editors reviewed the contents of the list and built what amounted to a taxonomy of the contents. Items are listed alphabetically and are referenced by number in the index. As it turned out, the process of assembling this bibliography was iterative, and additions, with some deletions, took over one year. Referencing by number was the most direct and simplified method.

Accession For	
NTIS GRA&I	<input checked="checked" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	

1. Akers, J. F., & Clark, R. A. (1973, October). Operational evaluation of the ARTS II radar alpha-numeric display subsystem (RADS) (RD-73-149) Interim Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
2. Applied Psychology Corporation. (1961, April). Pilot judgements of simulated collisions and near misses: A comparison of performance with uncoded and two-tone coded models (FAA/BRD-127 #5). Arlington, VA.
3. Applied Psychology Corporation. (1961, June). Comparative conspicuity of several aircraft exterior paint patterns (FAA/BRD-127 #2). Arlington, VA.
4. Applied Psychology Corporation. (1961, June). Aircraft flight attitude information as indicated by exterior paint patterns (FAA/BRD-127 #3). Arlington, VA.
5. Applied Psychology Corporation. (1961, June). Field study of threshold ranges for aircraft detection and color identification (FAA/BRD-127 #4). Arlington, VA.
6. Applied Psychology Corporation. (1961, December). The role of paint in mid-air collision prevention (FAA/BRD-127 #1). Arlington, VA.
7. Applied Psychology Corporation. (1962, March). Flight simulator tests of altitude-coded lights (FAA/BRD-127 #8). Arlington, VA.
8. Applied Psychology Corporation. (1962, April). Outdoor test range evaluation of aircraft paint patterns (FAA/BRD-127 #7). Arlington, VA.
9. Applied Psychology Corporation. (1962, June). Pilot judgements of aircraft range and relative altitude: Ground-to-air and air-to-air observations (FAA/BRD-127 #10 & #11). Atlantic City, NJ: National Aviation Facilities Experimental Center.

10. Applied Psychology Corporation. (1962, June). Distance estimation of frequency-coded and uniformly flashing lights (FAA/BRD-127 #12). Atlantic City, NJ: National Aviation Facilities Experimental Center.
11. Applied Psychology Corporation. (1962, June). Conspicuity of selected signal lights against city-light backgrounds (FAA/BRD-127 #13). Atlantic City, NJ: National Aviation Facilities Experimental Center.
12. Applied Psychology Corporation. (1962, July). Altitude evasion in visual collision avoidance (FAA/BRD-127 #15). Atlantic City, NJ: National Aviation Facilities Experimental Center.
13. Applied Psychology Corporation. (1962, August). The role of visible trails in mid-air collision prevention (FAA/BRD-127) Final Report #3. Atlantic City, NJ: National Aviation Facilities Experimental Center.
14. Applied Psychology Corporation. (1963, January). Conspicuity of tall radio and television towers under marginal visual flight rules weather (FAA/ARDS-431). Atlantic City, NJ: National Aviation Facilities Experimental Center.
15. Applied Psychology Corporation. (1963, March). Flight test of an altitude-coded aircraft light (FAA/BRD-127 #16). Atlantic City, NJ: National Aviation Facilities Experimental Center.
16. Applied Psychology Corporation. (1963, May). The role of range and altitude judgement in mid-air collision prevention (FAA/BRD-127 Final Report #2). Atlantic City, NJ: National Aviation Facilities Experimental Center.
17. Applied Psychology Corporation. (1963, November). The role of optical devices in mid-air collision prevention (FAA/BRD-127). Atlantic City, NJ: National Aviation Facilities Experimental Center.
18. Arad, B., Golden, B. T., Grambart, J. E., Mayfield, C. E., & van Saun, H. R. (1963, December). Control load, control capacity and optimal sector design (RD-64-16) (FAA/ARDS-634). Philadelphia, PA: Franklin Institute Laboratories.

19. Barab, J. D., Page, R. D., Rosenberg, B. L., Zurinskas, T. E., & Smythe, G. R. (1988, August). Evaluation of enhancements to the low level wind shear alert system (LLWAS) at Stapleton International Airport (RD-64-16) (DOT/FAA/CT-88/6). Atlantic City, NJ: Federal Aviation Administration Technical Center.
20. Bassford, R. S. (1973, August). Technical evaluation of weather clutter feasibility model (RD-73-85) Interim Report. Atlantic City, NJ: National Aviation Facilities Experimental Center. (NTIS No. AD-766-007)
21. Bishop, D. E. (1964, December). Analysis of community and airport relationships/noise abatement: Development of aircraft noise compatibility criteria for varied land uses (RD-64-148) 2. Los Angeles, CA: Bolt, Beranek, and Newman, Inc.
22. Bishop, D. E. (1964, December). Analysis of community and airport relationships/noise abatement: Discussion of some legal aspects of aircraft noise (RD-64-148) 3. Los Angeles, CA: Bolt, Beranek, and Newman, Inc.
23. Bishop, D. E. (1965, December). Analysis of community and airport relationships/noise abatement: Predicting community response to aircraft noise (RD-65-130 Part I) Final Report. Van Nuys, CA: Bolt, Beranek, and Newman, Inc.
24. Bishop, D. E. (1965, December). Analysis of community and airport relationships/noise abatement: Judgements of the relative and absolute acceptability of actual and recorded aircraft noise (RD-65-130 Part II) Final Report. Van Nuys, CA: Bolt, Beranek, and Newman, Inc.
25. Bishop, D. E. (1965, December). Analysis of community and airport relationships/noise abatement: The reduction of aircraft noise measured in several school, motel and residential rooms (RD-65-130 Part IV) Final Report. Van Nuys, CA: Bolt, Beranek, and Newman, Inc.

26. Bishop, D. E., et al (1965, December). Analysis of community and airport relationships/noise abatement: Work accomplishments May 1964 through April 1965 (RD-65-130) Final Report (seven parts). Van Nuys, CA: Bolt, Beranek, and Newman, Inc.
27. Bishop, D. E., & Horonjeff, R. D. (1965, December). Analysis of community and airport relationships/noise abatement: Computer-aided study of time patterns of noise from jet aircraft takeoffs (RD-65-130 Part V) Final Report. Van Nuys, CA: Bolt, Beranek, and Newman, Inc.
28. Bishop, D. E., & Horonjeff, R. D. (1965, December). Analysis of community and airport relationships/noise abatement: A study of aircraft flyover noise variations due to changes in flight paths and atmospheric sound transmission characteristics (RD-65-130 Part VI) Final Report. Van Nuys, CA: Bolt, Beranek, and Newman, Inc.
29. Bishop, D. E. (1965, December). Analysis of community and airport relationships/noise abatement: Applications of methods for rating land use compatibility with aircraft noise (RD-65-130 Part VII) Final Report. Van Nuys, CA: Bolt, Beranek, and Newman Inc.
30. Bloom, J. (1961, April). Airport visual displays (FAA/BRD-14). Philadelphia, PA: Franklin Institute Laboratories.
31. Bolt, Beranek, and Newman, Inc. (1964, December). Analysis of community and airport relationships/noise abatement: Development of aircraft noise problems using computer-aided techniques (RD-64-148) 2. Los Angeles, CA.
32. Bottomly, D., Zurinskas, T. E., & Ezekiel, E. (1980, August). New terminal radar approach control in tower cab (TRACAB) concept for Love Field, Dallas Texas (FAA-RD-80-79). Atlantic City, NJ: Federal Aviation Administration Technical Center.
33. Bradley, J. R. (1972, October). Evaluation of high activity level tower cab (DOT/FAA/RD-72-111). Atlantic City, NJ: National Aviation Facilities Experimental Center.

34. Bradley, J. R., & Milligan, H. D. (1970, August). Live tests of tower cabs radar approach control procedures (RD-70-31) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
35. Brown, D. O., Connolly, D. W., & Maurer, J. J. (1968, April). Evaluation of automated TRACON functions (RD-67-61) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
36. Brown, G. S., & Sulzer, R. L. (1969, August). Simulation test of the Arcata, California diamond runway centerline (RD-69-35) Interim Report. Atlantic City, NJ: National Aviation Facilities Experimental Center. (NTIS No. AD-691-721)
37. Brown, G. S., & Sulzer, R. L. (1970, August). Simulation of a continuous runway centerline marking (RD-70-40) Interim Report. Atlantic City, NJ: National Aviation Facilities Experimental Center. (NTIS No. AD-711-254)
38. Brown, G. S., & Sulzer, R. L. (1971, July). Simulation study of chevron markings for areas adjacent to runway thresholds (RD-71-40) Interim Report. Atlantic City, NJ: National Aviation Facilities Experimental Center. (NTIS No. AD-726-435)
39. Buckanin, D. L., Guishard, R. C., & Paul, L. E. (1984, October). Closely spaced independent parallel runway simulation (DOT/FAA/CT-84/45). Atlantic City, NJ: Federal Aviation Administration Technical Center.
40. Buckley, E., & Beebe, T. (1972, January). The development of a motion picture measurement instrument for aptitude for air traffic control (RD-71-106) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center. (NTIS No. AD-735-942)
41. Buckley, E. P., DeBaryshe, B. D., Hitchner, N., & Kohn, P. (1983, April). Methods and measurements in real-time air traffic control system simulation (DOT/FAA/CT-83/26). Atlantic City, NJ: Federal Aviation Administration Technical Center. (NTIS No. AD-A193 533/7/XAB)

42. Buckley, E. P., DeBaryshe, B. D., Hitchner, N., & Kohn, P. (1984, October). An empirical study of the methodology for real-time air traffic control system simulation testing. Journal of Test and Evaluation, 5, 20-25.
43. Buckley, E. P., DeBaryshe, B. D., Hitchner, N., & Kohn, P. (1984, December). Methods and measurements in real-time air traffic control system simulation. Psychological Documents, 14(2), 33-34.
44. Buckley, E. P., Goldberg, B., Rood, R., Hamilton, H., & Champion, F. (1976, February). Development of a performance criterion for enroute air traffic control personnel research through air traffic control simulation: Experiment I - parallel form development (RD-75-186) Interim Report. Atlantic City, NJ: National Aviation Facilities Experimental Center. (NTIS No. AD-A023 411/2)
45. Buckley, E. P., & Green, T. H. (1962, March). Information display in the air traffic control system, a coordinated research and development approach (FAA/BRD-423). Philadelphia, PA: Franklin Institute Laboratories.
46. Buckley, E. P., Hitchner, N., & Kohn, P. (1983, April). System effectiveness measurement methodology for real-time air traffic control system simulation experimentation (Interim Report). Atlantic City, NJ: National Aviation Facilities Experimental Center.
47. Buckley, E. P., House, K., & Rood, R. (1978, July). Development of a performance criterion for air traffic control personnel research through air traffic control simulation (RD-78-71) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center. (NTIS No. AD-A058 082/9)
48. Buckley, E. P., McLaughlin, F. X., & Benson, S. D. (1960, April). Pilot experiments concerning air traffic control decision making (FAA/BRD-14). Philadelphia, PA: Franklin Institute Laboratories.

49. Buckley, E. P., & McLaughlin, F. X. (1959, June). A perspective on the impact of communications on air traffic control decision making (FAA/BRD-14) Final Report. Philadelphia, PA: Franklin Institute Laboratories.
50. Buckley, E. P., Paul, L. E., & Connolly, D. W. (1970, May). Man/machine relationship in NAS automation (Completion Report). Atlantic City, NJ: National Aviation Facilities Experimental Center.
51. Buckley, E. P., O'Connor, W. F., Beebe, T., Adams, W., & MacDonald, G. (1969, September). A comparative analysis of individual and system performance indices for the air traffic control system (RD-69-50). Atlantic City, NJ: National Aviation Facilities Experimental Center. (NTIS No. AD-710 795)
52. Buckley, E. P., O'Connor, W. F., Beebe, T., Adams, W., & MacDonald, G. (1973, Summer). A comparative analysis of individual and system performance indices for the air traffic control system. Catalog of Selected Documents in Psychology, 3, 108-109.
53. Busch, A. (1970, November). Before and after ARTS II automation (RD-71-51) Data Report (Proj. No. 151-515-05X). Atlantic City, NJ: National Aviation Facilities Experimental Center.
54. Busch, A. C. (1970, April). The manual operations at Jacksonville ARTCC (Proj. No. 167-641-01X) Data Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
55. Busch, A. C. (1971, March). Analysis of co-channel interference test (Technical Note 71-20). Atlantic City NJ: National Aviation Facilities Experimental Center, Test and Evaluation.
56. Busch, A. C. (1971, November). Modeling and analysis of air traffic control voice communication channel loading (RD-71-78) Interim Report. Atlantic City, NJ: National Aviation Facilities Experimental Center. (NTIS No. AD-732-619)

57. Castle, B. (1974, January). Evaluation of identification beacons for airport emergency vehicles (RD-73-196) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
58. Catalano, J., & McKnown, C. (1963, December). A study of requirements for a pilot warning instrument for visual airborne collision avoidance (RD-64-88) (FAA/BRD-322) Final Report. Great Neck, NY: Sperry Gyroscope Company.
59. Clark, W. E. (1964, December). Analysis of community and airport relationships/noise abatement: An approach to analysis of aircraft noise problems using computer-aided techniques (RD-64-148) 1. Los Angeles, CA: Bolt, Beranek, and Newman, Inc.
60. Connolly, D. W. (1968, August). Display of weather contours (Interim Report). Atlantic City, NJ: National Aviation Facilities Experimental Center. (NTIS No. AD-673-417)
61. Connolly, D. W. (1979, August). Voice data entry in air traffic control (FAA-NA-79-20). Atlantic City, NJ: National Aviation Facilities Experimental Center.
62. Connolly, D. W., & McCosker, W. R. (1970, November). Human factors in use of terminal radar (analogue) display systems (RD-70-66) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center. (NTIS No. AD-714-335)
63. Connolly, D. W., Spanier, G., & Champion, F. (1975, May). Color display evaluation for air traffic control (RD-75-39) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
64. Courtney, D. (1961, December). Human factors in airport tower design (FAA/BRD-390). Philadelphia, PA: Courtney and Company.
65. Courtney, D., & Silvestro, A. W. (1961, September). Lighting, color, and seeing in IFR air traffic control spaces (FAA/BRD-301) Technical Report. Philadelphia, PA: Courtney and Company.

66. Crook, W., & Sulzer, R. (1968, February). Simulation and analysis of over-ocean separation assurance procedures and displays (RD-67-43) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center. (NTIS No. AD-666-829)
67. Crook, W. G., & Sulzer, R. L. (1970, June). The value of warning-only PWI (FAA-NA-70-53). Atlantic City, NJ: National Aviation Facilities Experimental Center.
68. Crook, W., Sulzer, R., & Hill, P. (1971, December). Aircraft avoidance maneuver rules for use with a pilot warning instrument (turn and miss indicator) (FAA-NA-72-22) Interim Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
69. Danaher, J., & Bradbury, P. W. (1962, June). A bibliography for terminal area air traffic control system design (FAA/BRD-301). Philadelphia, PA: Matrix Corporation.
70. Davis, C. G., Danaher, J. W., & Fischl, M. A. (1963, June). The influence of selected sector characteristics upon ARTCC controller activities (FAA/BRD-301 #2) Final Report. Arlington, VA: Matrix Corporation.
71. Davis, C. G., Kerle, R. H., Silvestro, A. W., & Wallace, W. H. (1960, March). The air traffic control training program as viewed by training supervisors (FAA/BRD-40). Philadelphia, PA: Courtney and Company.
72. Davis, C. G., Kerle, R., Silvestro, A. W., & Wallace, W. H. (1960, April). Identification of training requirements in air traffic control (FAA/BRD-40). Philadelphia, PA: Courtney and Company.
73. Davis, C. G., Kerle, R., Silvestro, A. W., & Wallace, W. H. (1960, June). An activity analysis of the positions in a high activity air traffic control tower (FAA/BRD-40), 9 Reports. Philadelphia, PA: Courtney and Company.
74. Davis, C. G., & Wallace, W. H. (1961, June). The controller in positive and traditional control (FAA/BRD-301). Philadelphia, PA: Courtney and Company.

75. Davis, C. G., Wallace, W. H., Kerle, R. H., & Silvestro, A. W. (1960, June). Activity analysis of the positions in a high activity ARTC center (FAA/BRD-40). Philadelphia, PA: Courtney and Company.
76. Doug, J. (1972, October). Transcribed pilot report (PIREP) broadcast system, test and evaluation (RD-72-97) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center. (NTIS No. AD-750-828)
77. Douglas, C. A. (1961, January). Analysis of the usefulness of coded information in visual collision avoidance (FAA/BRD-127 #1). Arlington, VA: Applied Psychology Corporation.
78. Eldredge, D. (1973, June). The before and after ARTS III automation at Boston terminal (Proj. No. 012-603-010) Data Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
79. Eldredge, D. (1973, June). The before and after ARTS III level of automation at Houston Terminal (IAH) (Proj. No. 012-603-010) Data Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
80. Eldredge, D., Crook, W., & Rich, P. (1977, August). Simulation of original and NAFEC-proposed intermittent positive control cockpit displays (RD-77-73) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
81. Eldredge, D., Crook, W. G., & Crimbring, W. R. (1977, October). Simulation tests of flight technical error in 2d/3d area navigation (RNAV) using a multiple waypoint RNAV system with and without a flight director system (RD-77-112) Final Report (Proj. No. 044-326-350). Atlantic City, NJ: National Aviation Facilities Experimental Center.
82. Fabry, J. M., & Grossberg, M. (1986, November). The integrated ATC systems research and development laboratory: The FAA technical center's unique facility. Proceedings of the Air Traffic Controllers Association Meeting. Arlington VA: Air Traffic Control Association.

83. Fabry, J., & Stein, E. S. (1981, July). Advanced aviation concepts evaluation through computer driven simulation. Proceedings of the 1981 Summer Computer Simulation Conference (pp. 659-661). Washington, DC: AFIPS Press.
84. Fabry, J., & Stein, E. S. (1983, October). Evaluating human operator effectiveness in ATC system operations. Proceedings of the 28th Annual Air Traffic Control Association Fall Conference (LC No. 79-643160) (pp. 27-33). Arlington, VA: Air Traffic Control Association.
85. Fabry, J. M., Stein, E. S., & Enias, J. H. (1984, May). General aviation use of the cockpit display of traffic information (CDTI) in low density airspace (DOT/FAA/CT-TN84/8). Atlantic City, NJ: Federal Aviation Administration Technical Center.
86. Forbes, J. L., & Lofaro, R. J. (1994, February). Test and evaluation plan for the manual domestic passive profiling system (MDPPS) (DOT/FAA/CT-94/22) Project Report. Atlantic City, NJ: Federal Aviation Administration Technical Center.
87. Garland, D. J., & Stein, E. S. (1992, November). Air traffic controller memory: Implications for ATC tactical operations. Proceedings of the 37th Air Traffic Control Association Conference. Atlantic City, NJ: Federal Aviation Administration Technical Center.
88. Garland, D. J., Stein, E. S., Blanchard, J. W., & Wise, J. A. (1992, November). Situational awareness in the future air traffic control environment. Proceedings of the 37th Air Traffic Control Association Conference. Atlantic City, NJ: Federal Aviation Administration Technical Center.
89. Garland, D., Stein, E. S., Wise, J. A., & Blanchard, J. W. (1993). Situation awareness in air traffic control: A critical yet neglected phenomenon. In D. J. Garland and J. A. Wise (Eds.) Human Factors and Advanced Aviation Technologies. Daytona Beach, FL: Embry Riddle Aeronautical University Press.

90. Gates, R. F. (1970, November). Visual approach slope indicator (VASI) system for long-bodied aircraft (RD-70-76) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
91. Gates, R. F., & Phillips, C. B. (1969, November). Evaluation of taxiway guidance signs (Interim Report). Atlantic City, NJ: National Aviation Facilities Experimental Center.
92. Gates, R. F., & Phillips, C. B. (1970, January). Evaluation of taxiway guidance signs (RD-69-60) Interim Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
93. General Dynamics Corporation. (1962, August). Analysis of voice signal intelligibility in airborne environments (FAA/ARDS-480) Final Reports. Pomona, CA.
94. General Dynamics Corporation. (1962, August). Analysis of ground-air-ground communications loads on AGACS and in future ATC systems (FAA/BRD-418) Final Report. Pomona, CA.
95. Grambart, J. E. (1972, November). Human engineering analysis of airport lighting control panels and a proposal for a new design (RD-72-93) Interim Report. Atlantic City, NJ: National Aviation Facilities Experimental Center. (NTIS No. AD-752-134)
96. Green, T. H. (1964, November). Information relative to the possible implementation of a sonic boom simulation facility at NAFEC (Technical Note). Atlantic City, NJ: National Aviation Facilities Experimental Center, Research Division.
97. Green, T. H. (1966, May). Discussion of the utility of available techniques for measuring aircraft noise and predicting community response (RD-66-31) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center, Test and Evaluation Division.

98. Gromelski, S., Davidson, L., & Stein, E. S. (1992, March). Controller memory enhancement-field facility concepts and techniques (DOT/FAA/CT-TN92/7). Atlantic City, NJ: Federal Aviation Administration Technical Center.
99. Gustafson, P. C., Aschenbach, J., & Sulzer, R. L. (1976, May). Plan view display (PVD) background lighting (RD-76-46) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
100. Hamilton, H. W. (1978, February). Feasibility study for simulation of an airport tower control environment (RD-77-190). Atlantic City, NJ: National Aviation Facilities Experimental Center.
101. Havron, D. M. (1962, March). Information available from natural cues during final approach and landing (RD-353) (FAA/BRD-401). Arlington, VA: Human Sciences Research Inc.
102. Hierbaum, F. F., Zito, P., & Zurinskas, T. E. (1982, July). Development of supervisor desk modules for terminal radar approach control (TRACON) facilities (DOT/FAA/CT-82/50). Atlantic City, NJ: Federal Aviation Administration Technical Center.
103. Hill, J., & Brown, G., et al (1961, June). Visual landing simulator study of three lineal runway lighting configurations. Atlantic City, NJ: National Aviation Facilities Experimental Center.
104. Hitchcock, L., Paul, L. E., Shochet, E., & Algeo, R. D. (1989, November). Atlanta tower simulations (DOT/FAA/CT-TN89/27). Atlantic City, NJ: Federal Aviation Administration Technical Center.
105. Hitchcock, L., Paul, L. E., Shochet, E., & Algeo, R. D. (1989, November). Dallas/Fort Worth simulations (DOT/FAA/CT-TN89/27). Atlantic City, NJ: Federal Aviation Administration Technical Center.

106. Jolitz, G. (1965, June). Evaluation of a mathematical model for use in computing control load at ATC facilities (RD-65-69) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
107. Jolitz, G. (1972, March). ATC/CAS interface simulation - exploratory phase (RD-72-10). Atlantic City, NJ: National Aviation Facilities Experimental Center.
108. Jolitz, G. (1973, November). Air traffic control/collision avoidance system interface simulation-phase II (RD-73-140) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
109. Kamrass, M., Rosenshine, M., Schneyer, S., & Smith, M. D. (1960, September). The evaluation of airport noise and community reaction (FAA/BRD-15). Buffalo, NY: Cornell Aeronautical Laboratories.
110. Karsten, G., Goldberg, B., Rood, R., & Sulzer, R. (1975, February). Oculometer measurement of air traffic controller visual attention (Interim Report). Atlantic City, NJ: National Aviation Facilities Experimental Center.
111. Katz, E. S., & Stein, E. S. (1992, September). Prototype stop bar system evaluation at John F. Kennedy international airport (DOT/FAA/CT-92/24). Atlantic City, NJ: Federal Aviation Administration Technical Center.
112. Kerle, R. H., Silvestro, A. W., & Wallace, W. H. (1961, September). An activity analysis of the positions in a high activity flight service station (FAA/BRD-40). Philadelphia, PA: Courtney and Company.
113. Kershner, A. M. (1968, November). Air traffic control system error data for 1965 and 1966 as related to age, workload, and time-on-shift of involved controller personnel (NA-68-12) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.

114. Kohn, P., & Stein, E. S. (1982, October). The measurement of pilot workload. Proceedings of the 27th Annual Air Traffic Control Association Fall Conference. Atlantic City, NJ: Federal Aviation Administration Technical Center.
115. Kramer, J. J. (1965, February). Alteration of runway width - a feasibility study (Technical Note). Atlantic City, NJ: National Aviation Facilities Experimental Center, Research Division.
116. Kryter, K. D., & Pearsons, K. S. (1963, April). Some effects of spectral content and duration on perceived noise level (Contract NASr-58). Cambridge, MA: Bolt, Beranek, and Newman, Inc.
117. Landis, D., Silver, C. A., & Jones, J. M. (1967). Level of proficiency and multidimensional viewpoints about problem similarity. In Air Traffic Controllers Journal of Applied Psychology, 51(3), 216-222.
118. Lasewicz, V. J., & Smolensky, M. W. (1993, April). The FAA technical center human factors laboratory information guide (DOT/FAA/CT-TN93/15) Technical Note. Atlantic City, NJ: Federal Aviation Administration Technical Center.
119. Levy, J., & Crawford, V. (1973, October). System integration and system shakedown tests, NAS enroute stage a model a3dl (RD-73-135) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center. (NTIS No. AD-768-202)
120. Lofaro, R. J. (1994, February). Independent review of aviation technology and research information analysis system (ATRIAS) database (DOT/FAA/CT-94/12) Final Report. Atlantic City, NJ: Federal Aviation Administration Technical Center.
121. LoFaro, R. J. (1994, March). Development of decision-centered interventions for airport security checkpoints (DOT/FAA/CT-94/27) Final Report. Atlantic City, NJ: Federal Aviation Administration Technical Center.

122. Lybrand, W. A., Vaughan, W. S., & Robinson, J. P. (1959, May). Airport marking and lighting systems - a summary of operational tests and human factors (Contract No. FAA/BRD-13) Final Report. Arlington, VA: Human Sciences Research, Inc.
123. Matrix Corporation. (1963, February). System design-enroute/terminal area interface. Atlantic City, NJ: National Aviation Facilities Experimental Center.
124. Maurer, J., Matos, R., Rosenberg, B. L., Sluka, A., Lyon, H., Plisko, J., & Yulo, C. (1982, March). Mexico City graphic study (DOT/FAA/CT-82/17). Atlantic City, NJ: Federal Aviation Administration Technical Center.
125. Maurer, J., Misiewicz, V. J., & Tack, R. W. (1978, January). Las Vegas graphic study (RD-77-182). Atlantic City, NJ: National Aviation Facilities Experimental Center.
126. Mayfield, C. E. (1964, November). A comparison of three arrangements of alphanumeric data for air traffic control displays (RD-65-15) (FAA/BRD-423). Philadelphia, PA: Franklin Institute Laboratories.
127. Mayfield, C. E. (1967, April). Empirical human factors investigation of display design (RD-67-12) Final Report (FAA/BRD-423 (Proj. No. 104-127R). Philadelphia, PA: Franklin Institute Laboratories.
128. McCormick, M. Y., & Sarlanis, K. (1964, October). Intelligibility tests of automatic broadcasts vs. live messages (RD-64-122) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
129. McCosker, W. R., & Buckley, E. P. (1970, November). Man-machine relationship in NAS automation (Technical Note 70-4). Atlantic City, NJ: National Aviation Facilities Experimental Center, Test and Evaluation.
130. McKelvey, R. K., & Brown, G. S. (1964, January). Simulator comparison of Netherlands landing zone lighting patterns (RD-64-25). Atlantic City, NJ: National Aviation Facilities Experimental Center.

131. McKelvey, R. K., & Brown, G. S. (1964, September). Analysis of approach lighting configurations for visual transition under category II operating conditions (RD-64-134). Atlantic City, NJ: National Aviation Facilities Experimental Center.
132. McKelvey, R. K., & Brown, G. S. (1964, November). Analysis of runway marking configurations for bright daylight contact fog operations (RD-64-154) Interim Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
133. McKelvey, R. K., Brown, G. S., & Ontiveros, R. J. (1961, April). Simulator comparison of three runway landing zone lighting patterns. Atlantic City, NJ: National Aviation Facilities Experimental Center.
134. McKelvey, R. K., Brown, G. S., & Ontiveros, R. (1961, May). Simulator comparisons of narrow gauge landing zone lighting patterns in longitudinal vs. lateral arrays. Atlantic City, NJ: National Aviation Facilities Experimental Center.
135. McKelvey, R. K., & Ontiveros, R. (1961, December). Longitudinal spacing variables in 3:2:1 patterns for touchdown zone lighting. Atlantic City, NJ: National Aviation Facilities Experimental Center.
136. McKelvey, R. K., & Ontiveros, R. (1962, April). Interaction between visual range and longitudinal spacing of elements in distance coded runway lighting arrays. Atlantic City, NJ: National Aviation Facilities Experimental Center.
137. McKenzie, R. E., Buckley, E. P., & Sarlanis, K. (1966, June). An exploration study of psychophysiological measurements as indicators of air traffic control sector workload (Memorandum Report). Atlantic City, NJ: National Aviation Facilities Experimental Center.
138. Meehan, F. J. (1964, February). Evaluation of lighted crossbars and lighted runway distance markers (RD-67-27). Atlantic City, NJ: National Aviation Facilities Experimental Center.

139. Milligan, H., & Rosenberg, B. L. (1976, February). Investigation of pilot self-briefing techniques, vol. I, methodology, results, and recommendations (RD-75-90). Atlantic City, NJ: National Aviation Facilities Experimental Center.
140. Milligan, H., & Rosenberg, B. L. (1976, February). Investigation of pilot self-briefing techniques, vol. II, appendixes (RD-75-90II). Atlantic City, NJ: National Aviation Facilities Experimental Center.
141. Milligan, H., & Rosenberg, B. L. (1979, June). Evaluation of the aviation weather and NOTAM system (AWANS) (RD-79-46). Atlantic City, NJ: National Aviation Facilities Experimental Center.
142. Mitchell, R., Sulzer, R., & Kopala, A. (1977, July). Boston air route traffic control center (ARTCC) lighting study (Final Report). Atlantic City, NJ: National Aviation Facilities Experimental Center.
143. Moser, H. M. (1964, July). The pronunciation of english air traffic control words by controllers from twelve ICAO nations (RD-64-123) (FAA/BRD-407) Final Report. Columbus: Ohio State University.
144. Moss, A., Hinkley, L., & Hamilton, H. W. (1975, October). Studies of subminiature lamps used for indicating purposes in the system maintenance monitor console (FAA-RD-75-168) Final Report. Washington, DC: DOT/Federal Aviation Administration.
145. Murray, C. (1978, December). The flight service station demonstration at the Leesburg, Virginia air route traffic control center (DOT/FAA/FSS-06). Atlantic City, NJ: Federal Aviation Administration Technical Center.
146. Nadler, E., Mengert, P., & Grossberg, M. (1994, March). Airport security screener performance gains due to computer-based instruction (safe passage) (DOT/FAA/CT-TN94/08) Final Report. Atlantic City, NJ: Federal Aviation Administration Technical Center.

147. Nadler, E., Mengert, P., DiSario, R., Sussman, E. D., Grossberg, M., & Spanier, G. (1993). Effects of satellite and voice switching equipment transmission delays on air traffic control communications. The International Journal of Aviation Psychology, 3(4), 315-325.
148. O'Brien, P. J., & Busch, A. C. (1969, March). Effects of selective system parameters on communications intelligibility (RD-68-59) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center. (NTIS No. AD-849-465L)
149. Ontiveros, R. J. (1968, October). General aviation cockpit display and control simulation (DS-68-17) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
150. Ontiveros, R. J., Spangler, R., Sulzer, R. (1978, March). General aviation (FAR 23) cockpit standardization analysis (Final Report). Atlantic City, NJ: National Aviation Facilities Experimental Center.
151. Paprocki, T. (1963, November). Evaluation of simplified approach lighting aids (RD-64-27) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
152. Paprocki, T. (1973, July). Visual approach slope indicator (VASI) improvements (RD-73-96) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center. (NTIS No. AD-763-562)
153. Paul, L. E. (1964, November). Design of the radar controllers' console for NAS en route stage a operations (Project No. 123-311-01R) Interim Memorandum Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
154. Paul, L. E. (1967, September). The plug in transponder. Journal of Air Traffic Control Association, 9(3). Atlantic City, NJ: National Aviation Facilities Experimental Center.

155. Paul, L. (1971, January). A possible improvement in the viewing angle of the NAS model 3 radar (Proj. No. 119-020-11X) Technical Note 71-1. Atlantic City, NJ: National Aviation Facilities Experimental Center.
156. Paul, L. E. (1972, September). An evaluation of potential reflection problems when using the NAS model 3d display in the vertical position in air route traffic control centers (RD-72-60) Interim Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
157. Paul, L. E. (1980, April). How can we learn from our mistakes if we never admit that we make any? The Controller, Journal of the International Federation of Air Traffic Controller Associations, 19(4).
158. Paul, L. E. (1985, May). Preliminary evaluation of the impact of cockpit display of traffic information on air traffic control (DOT/FAA/CT-TN83/51). Atlantic City, NJ: Federal Aviation Administration Technical Center.
159. Paul, L. E. (1986, September). Some human factors considerations in air traffic control display requirements (DOT/FAA/CT-TN86/28). Atlantic City, NJ: Federal Aviation Administration Technical Center.
160. Paul, L. E. (1990, June). Using simulation to evaluate the safety of proposed ATC operations and procedures (DOT/FAA/CT-TN90/22). Atlantic City, NJ: Federal Aviation Administration Technical Center.
161. Paul, L. E., Bradley, J. R., & Martin, D. A. (1976, October). An evaluation of window glass for air traffic control tower cabs (RD-76-105). Washington, DC: Federal Aviation Administration, SRDS.
162. Paul, L. E., & Buckley E. P. (1967, March). Human factors evaluation of large screen radar display (RD-66-105) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center. (NTIS No. AD-651-033)

163. Paul, L. E., Sarlanis, K., & Buckley, E. P. (1964, October). An empirical comparison of two data entry keyboards for advanced radar traffic control systems (RD-610) Memorandum Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
164. Paul, L. E., Shochet, E., & Talotta, J. (1980, July). Analysis of flight service station consolidation phase III: Indianapolis, Fort Wayne, and Terra Haute flight service stations (RD-80-57). Washington DC: Federal Aviation Administration.
165. Paul, L. E., & Stemple, S. A. (1982, December). The evaluation of several display parameters for the flight service automation system (DOT/FAA/CT-81/3). Atlantic City, NJ: Federal Aviation Administration Technical Center.
166. Pazera, E. E. (1963, May). An analysis of requirements for displaced threshold runway lighting (RD-610) Interim Memorandum Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
167. Projector, T. H. (1962, July). The role of exterior lights in mid-air collision prevention (FAA/BRD-127) Final Report #4. Arlington, VA: Applied Psychology Corporation.
168. Projector, T. H., Porter, L. G., & Cook, K. G. (1962, July). Effects of back-scattered light on target light detectibility in a ground test environment (FAA/BRD-127 #6, #9, & #14). Arlington, VA: Applied Psychology Corporation.
169. Projector, T. H., & Robinson, J. E. (1958, September). Mid-air collision avoidance with navigation light systems. Arlington, VA: Applied Psychology Corporation.
170. Rehmann, J. T. (1982, February). Cockpit display of traffic information and the measurement of pilot workload: An annotated bibliography (EM-81/9) (CT-81/49) Final Report. Atlantic City, NJ: Federal Aviation Administration Technical Center.

171. Rehmann, J. T. (1983, October). Pilot factors in navigation (DOT/FAA/CT-TN83/37) Technical Note. Atlantic City, NJ: Federal Aviation Administration Technical Center.
172. Rehmann, J. T., Stein, E. S., & Rosenberg, B. L. (1983). Subjective pilot workload assessment. Human Factors, 25(3), 297-307.
173. Rich, P. M., Crook, W. C., Sulzer, R. L., & Hill, P. R. (1971, December). Reactions of pilots to warning systems for visual collision avoidance (RD-71-61) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
174. Robinson, T. W. (1964, July). Selected bibliography for the general aviation simulation program (RD-64-91) Interim Memorandum Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
175. Robinson, T. W. (1964, September). Pendant cable marking analysis. Atlantic City, NJ: National Aviation Facilities Experimental Center.
176. Robinson, T. W., & McKelvey, R. K. (1963, June). A building blocks concept for VFR airport lighting (RD-610) Interim Memorandum Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
177. Rollins, W. F., & Vaughan, W. S. (1963, February). Ability of observers to adjustment linear stimuli to a horizontal orientation. Atlantic City, NJ: National Aviation Facilities Experimental Center.
178. Romei, J. M. (1977, September). Automated user access support, tests, and demonstrations (DOT/FAA/NA-77-37-LR). Atlantic City, NJ: National Aviation Facilities Experimental Center.
179. Rosenberg, B. L. (1967). An inexpensive random-noise generator. Journal of the Experimental Analysis of Behavior, 10, 373-374. Atlantic City, NJ: National Aviation Facilities Experimental Center.

180. Rosenberg, B. L. (1971, September). An introduction to dilatant impact absorbing devices, DIADS. Atlantic City, NJ: National Aviation Facilities Experimental Center. (NTIS No. AD-708-017)
181. Rosenberg, B. L. (1972, May). Annotated bibliography on the relationship between air ions and free radicals in biological systems (NA-72-19). Atlantic City, NJ: National Aviation Facilities Experimental Center.
182. Rosenberg, B. L. (1972, May). A study of atmospheric ionization: Measurement of the ion conditions in an ATC laboratory and a review of the literature of ion effects on performance. Atlantic City, NJ: National Aviation Facilities Experimental Center. (NTIS No. AD-742-474)
183. Rosenberg, B. L. (1973, January). Noise measurements of ODEC medium speed line printer and evaluation of factors relevant to its use in the ARTCC environment (Letter Report from ANA-230 to ARD-161C). Atlantic City, NJ: National Aviation Facilities Experimental Center.
184. Rosenberg, B. L. (1978, March). Analysis of data obtained through a specialist opinion survey conducted at the Leesburg FSS (DOT/FA/NA-21LR/). Atlantic City, NJ: National Aviation Facilities Experimental Center.
185. Rosenberg, B. L. (1980, March). Human factors program analysis: A study of potential actions to increase program effectiveness in the FAA and at NAFEC (EMS). Atlantic City, NJ: National Aviation Facilities Experimental Center, ANA-4.
186. Rosenberg, B. L. (1985). Human factors design considerations in the traffic management system workstation. Proceedings of the 30th Annual Air Traffic Control Association Fall Conference. Atlantic City, NJ: National Aviation Facilities Experimental Center.
187. Rosenberg, B. L. (1989, February). Osborne Reynolds' submechanics of the universe: A structured context for matter, energy, space, time, and PSI phenomena. Presented at the Atlantic University Parapsychology Symposium. Virginia Beach, VA.

188. Rosenberg, B. L. (1990, March). Voice switching and control system (VSCS) voice delay study (Final Report). Atlantic City, NJ: Federal Aviation Administration Technical Center.
189. Rosenberg, B. L. (1991, September). Voice switching and control system (VSCS) stability test results for the Harris VSCS prototype (Final Report). Atlantic City, NJ: Federal Aviation Administration Technical Center, ACN-120.
190. Rosenberg, B. L. (1992, February). Analysis of end-of-run questionnaire data from FAATC ATC simulation tests using the NAS simulation support facility and the target generation facility conducted January 28th to 30th 1992 (Quick-Look Report). Atlantic City, NJ: Federal Aviation Administration Technical Center, ACN-120.
191. Rosenberg, B. L., & Bonello, A. (1984, January). Automated air traffic control tower siting. Atlantic City, NJ: Federal Aviation Administration Technical Center, ACN-120.
192. Rosenberg, B. L., & Holladay, R. (1978, August). The effects of installation of MAPS on specialists' workload at the DCA FSS (DOT/FAA/NA-78-20LR). Atlantic City, NJ: Federal Aviation Administration Technical Center.
193. Rosenberg, B. L., & Landis, D. (1968, May). A factor analytic study of activity patterns over twenty muscles measured during a four-hour tracking task. Proceedings of the IEEE 9th Symposium on Human Factors. Washington, D.C.
194. Rosenberg, B. L., Landis, D., & Slivka, R. M. (1967). The relationship between stimulus density, compression and certitude. Paper presented at the meeting of the Midwestern Psychological Association.
195. Rosenberg, B. L., Page, R. D., & Zurinskas, T. E. (1988). Controller evaluation of the enhanced low-level wind shear alert system (LLWAS) at Denver. Proceedings of the 33rd Annual Air Traffic Control Association Fall Conference. Atlantic City, NJ: Federal Aviation Administration Technical Center.

196. Rosenberg, B., Rehmann, J., & Stein, E. S. (1982, October). The relationship between effort rating and performance in a critical tracking task (DOT/FAA/CT-82/66). Atlantic City, NJ: Federal Aviation Administration Technical Center.
197. Rosenberg, B. L., Roth, M., Landis, D., & Silver, C. (1967). A low-cost, reliable and accurate general-purpose timer. Journal of the Experimental Analysis of Behavior, 10, 383-385. Atlantic City, NJ: Federal Aviation Administration Technical Center.
198. Rosenberg, B. L., Walker, K., & Sanders, L. (1990, February). Quick-look report on FAA technical center post-fat harris VSCS evaluation study. Atlantic City, NJ: Federal Aviation Administration Technical Center, ACN-120.
199. Rosenberg, B. L., Walker, K., & Sanders, L. (1990, July). Voice switching and control system (VSCS) post-factory acceptance test controller usability evaluation of the AT&T VSCS prototype (Final Report). Atlantic City, NJ: Federal Aviation Administration Technical Center, ACN-120.
200. Rosenberg, B. L., Walker, K., & Sanders, L. (1990, July). Voice switching and control system (VSCS) post-factory acceptance test controller usability evaluation of the Harris VSCS prototype (Final Report). Atlantic City, NJ: Federal Aviation Administration Technical Center, ACN-120.
201. Rosenberg, B. L., Walker, K., Sanders, L., & Vento, G. (1990, October). FAA system stability test of the Harris VSCS prototype (Final Report). Atlantic City, NJ: Federal Aviation Administration Technical Center, ACN-120.
202. Rosenberg, B. L., Walker, K., Sanders, L., & Vento, G. (1990, October). FAA system stability test of the AT&T VSCS prototype (Final Report). Atlantic City, NJ: Federal Aviation Administration Technical Center, ACN-120.

203. Rosenberg, B. L. & Zurinskas, T. E. (1983, October). Electronic tabular display subsystem (ETABS) study: A controller evaluation of an en route flight data entry and display system (DOT/FAA/CT-TN83/09). Atlantic City, NJ: Federal Aviation Administration Technical Center.
204. Rosenberg, B. L. & Zurinskas, T. E. (1986, Fall). Rationale and rules-of-thumb for questionnaire-based system evaluation studies. 31st Annual Air Traffic Control Association Conference Proceedings. Arlington, VA: Air Traffic Control Association.
205. Rossiter, S. (1970, October). Graphic simulation study of two sites for a second major airport in Atlanta area (RD-70-63). Atlantic City, NJ: National Aviation Facilities Experimental Center.
206. Rossiter, S., Wiseman, R., Connelly, M., & Morgan, T. (1975, September). The controller/computer interface with an air-ground data link - volume 1 (FAA-RD-75-133,I) Final Report. Washington, DC: Systems Research and Development, DOT/Federal Aviation Administration.
207. Rutherford, L. G. (1966, March). Evaluation of ICAO recommended category II approach light systems for high performance aircraft (RD-66-23) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
208. Scott, G. A. (1962, June). Investigation of terminal area control system design (RD-353) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
209. Shelnutt, J. B., Childs, J. M., Prophet, W. W., & Spears, W. D. (1980, July). Human factors problems in general aviation (CT-80-194) Final Report. Atlantic City NJ: Federal Aviation Administration Technical Center.
210. Shingledecker, C., Zurinskas, T. E., Kerns, K., Marek, H. R., Van Campen, W., & Rosenberg, B. L. (1988, September). Controller evaluation of initial data link air traffic control services: Mini study 1, volumes I and II (DOT/FAA/CT-88/25). Atlantic City, NJ: Federal Aviation Administration Technical Center.

211. Silvestro, A. W., Kelly, J. B., & Courtney, D. (1959, June). Human factors considerations in the design of airport traffic control quarters (FAA/BRD-89) Interim Report. Philadelphia, PA: Courtney and Company.
212. Skelton, G. E., & Sulzer, R. L. (1971, June). Prevention of aircraft loss of control using a simple head-up display, (RD-71-28) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center. (NTIS No. AD-726-280)
213. Smith, M., Kashdan, L., Senn, L., Reeves, J., & Allen, J. (1960, June). Human factors analysis of voice communications practices in air traffic control (FAA/BRD-44), Volumes 1 and 2. Pomona, CA: General Dynamics Corporation.
214. Smith, S. H. (1966, July). Human factors checklist for equipment design. Atlantic City, NJ: National Aviation Facilities Experimental Center, Test and Evaluation Division.
215. Spangler, R. M., & Sulzer, R. L. (1968, February). Flight simulation study of air-to-air ranging displays for separation assurance (RD-66-83) Interim Report. Atlantic City, NJ: National Aviation Facilities Experimental Center. (NTIS No. AD-666-620)
216. Spingola, A. J., McCosker, W. R., & Sulzer, R. L. (1971, July). Evaluation of flight plan position information display for oceanic control (RD-71-38) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center. (NTIS No. AD-728-055)
217. Staiano, F., & Shocket, E. (1977, October). Executive summary: New York City pilots automatic telephone weather answering service (PATWAS) test (FAA-NA-77-23) (RD-77-80) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
218. Staiano, F., & Shochet, E. (1977, October). New York City pilots automatic telephone weather answering service (PATWAS) test, volume I (Final Report). Atlantic City, NJ: National Aviation Facilities Experimental Center.

219. Staiano, F., & Shochet, E. (1977, October). New York City pilots automatic telephone weather answering service (PATWAS) test, volume II (Final Report). Atlantic City, NJ: National Aviation Facilities Experimental Center.
220. Stein, E. S. (1981, October-December). Flight simulation as a research tool. Journal of the Air Traffic Control Association, 23(4), 22-23.
221. Stein, E. S. (1982, April). How hard is it to fly an airplane? Paper presented at the Annual Convention of the Eastern Psychological Association, Baltimore, MD.
222. Stein, E. S. (1983, April). The development of a pilot performance rating for general aviation. Paper presented at the Annual Convention of the Eastern Psychological Association, Philadelphia, PA.
223. Stein, E. S. (1983, April). Human factors in general aviation. Proceedings of the 1983 Conference-Army Medical Department Behavioral Sciences Research and Development, (pp. 94-96). Fort Rucker, AL: US Army Aeromedical Research Laboratory.
224. Stein, E. S. (1983, August). An automated performance measurement system for general aviation research. Paper presented at the Annual Convention of the American Psychological Association, Anaheim, CA.
225. Stein, E. S. (1983, October). Air traffic controllers are people too - the use of simulation to study what they do. Paper presented at the Annual Conference of the North American Simulation and Gaming Association, New Brunswick, NJ: Rutgers University.
226. Stein, E. S. (1984, April). Observer rating of air traffic controller workload during simulation. In V. Amico & A.B. Clymer (Eds.), All About Simulators-Proceedings of the SCS Simulators Conference, 14(1), 288-290.
227. Stein, E. S. (1984, May). The measurement of pilot performance: A master-journeyman approach (DOT/FAA/CT-83/15). Atlantic City, NJ: Federal Aviation Administration Technical Center.

228. Stein, E. S. (1984, July). The advantages of simulation for the study of air traffic controller workload-automated measurement techniques. In W. Wade (Ed.), Proceedings of the 1984 Summer Computer Simulation Conference, (Boston, MA) (pp. 1174-1178). La Jolla, CA: Society for Computer Simulation.
229. Stein, E. S. (1984, October). Controller workload: Past-present-future. Proceedings of the 29th Annual Air Traffic Controllers Association Fall Conference, (Dallas, TX) (pp. 290-293). Arlington, VA: Air Traffic Controllers Association. (LC No: 79-643160)
230. Stein, E. S. (1985, March). The simulation profession and air traffic control research. In A.G. Edwards (Ed.), The Simulation Profession - Proceedings of the Conference on the Simulation Profession (pp. 9-12). San Diego, CA: Simulation Councils Inc.
231. Stein, E. S. (1985, April). Air traffic controller workload: An examination of workload probe (DOT/FAA/CT-TN-84/24). Atlantic City, NJ: Federal Aviation Administration Technical Center.
232. Stein, E. S. (1985, July). Graphic simulation for air traffic controller development. Proceedings of the 1985 Summer Computer Simulation Conference, (Chicago, IL.) (pp. 653-656). La Jolla, CA: Society for Computer Simulation.
233. Stein, E. S. (1986, March). The air traffic controller in the evolving air traffic control system. In J. Young, V.W. Ingalls, and R. Hawkins (Eds.), Simulation at the Frontiers of Science-Proceedings of the Eastern Simulation Conferences, (Norfolk, VA.) (pp. 123-126). La Jolla, CA: Society for Computer Simulation.
234. Stein, E. S. (1986, October). The human side of air traffic controller automation. Proceedings of the 31st Annual Traffic Controllers Association Fall Conference. Arlington, VA: Air Traffic Controllers Association.

235. Stein, E. S. (1986, November). Graphic simulation and the automated enroute air traffic control concept: An FAA Technical Center preliminary study (DOT/FAA/CT-TN85/29). Atlantic City, NJ: Federal Aviation Administration Technical Center.
236. Stein, E. S. (1987). Flight crew workload. In M.G. Singh (Ed.), Systems and control encyclopedia. Oxford, England: Pergamon Press.
237. Stein, E. S. (1987, April). New simulations and old air traffic control requirements: The allocation of functions. In R. Hawkins and K. Klukis (Eds.), Tools for the Simulation Profession-Proceedings of the 1987 Conferences, (Orlando, FL.) (pp. 94-97). San Diego, CA: Simulation Councils, Inc. (ISBN 0-911801-17-0)
238. Stein, E. S. (1987, April). Where will all the air traffic controllers be in the year 2001? In R. Jensen (Ed.), Proceedings of the Fourth Symposium on Aviation Psychology. Columbus: Ohio State University.
239. Stein, E. S. (1987, October). So you want to simulate air traffic control? Paper presented at the annual meeting of the North American Simulation and Gaming Association. Lennoxville, Quebec, Canada.
240. Stein, E. S. (1988, April). Roles for simulation in air traffic control system development. In A.B. Clymer and V. Amico (Eds.). Simulators V, Proceedings of the SCS Simulators Conference, 19(4), 15-20, (ISBN 0-911801 240.0.1-34-0).
241. Stein, E. S. (1988, October). Simulations are part of the future of air traffic control. Paper presented at the annual meeting of the North American Simulation and Gaming Association. Asheville: University of North Carolina.
242. Stein, E. S. (1989, March). Air traffic controller scanning and eye movements in search of information-a literature review (DOT/FAA/CT-TN 89/9). Atlantic City, NJ: Federal Aviation Administration Technical Center. (NTIS No. ADA 206 709)

243. Stein, E. S. (1989, October). Simulation and procedural change-an FAA study on proposed changes in parallel approach separation. Proceedings of the 34th Annual Air Traffic Control Association. Arlington, VA. (LC No. 79-643160)
244. Stein, E. S. (1989, November). Parallel approach separation and controller performance-a study of the impact of two separation standards (DOT/FAA/CT-TN89/50). Atlantic City, NJ: Federal Aviation Administration Technical Center.
245. Stein, E. S. (1991, March). Air traffic controller memory-a field survey (DOT/FAA/CT-TN90/60). Atlantic City, NJ: Federal Aviation Administration Technical Center.
246. Stein, E. S. (1991, October-December). Evaluating air traffic controller workload using real time person in the loop simulation. In the Journal of Air Traffic Control, 33(4), 55-58.
247. Stein, E. S. (1991, December). Air traffic controller visual search. In the Proceedings of the 1991 Symposium on Command and Control Research. (Ft. McNair, Washington, DC), (pp 424-428). McLean, VA: Science Applications International Corporation.
248. Stein, E. S. (1992, July). Air traffic control visual scanning, (DOT/FAA/CT-TN92/16). Atlantic City, NJ: Federal Aviation Administration Technical Center.
249. Stein, E. S. (1993, April). Tracking visual scan of air traffic controllers. In the Proceedings of the Seventh Annual Symposium on Aviation Psychology. Columbus: Ohio State University.
250. Stein, E. S. (1993). Workload for operators in complex person-machine systems. In M. Pelegriin and W. M. Hollister (Eds). Concise Encyclopedia of Aeronautics and Space Systems, Oxford England: Pergamon Press.
251. Stein, E. S., & Bailey, J. (1989, December). The controller memory handbook (DOT/FAA/CT-TN89/58). Atlantic City, NJ: Federal Aviation Administration Technical Center.

252. Stein, E. S., & Fabry, J. (1982, October). Flight testing the CDTI concept. Proceedings of the 27th Annual Air Traffic Control Association Fall Conference. Atlantic City, NJ: Federal Aviation Administration Technical Center.
253. Stein, E. S., & Fabry, J. (1982, October). A systems' view of simulated flight in those crowded skies. Paper presented at the Annual Conference of the North American Simulation and Gaming Association, Ann Arbor: University of Michigan.
254. Stein, E. S., Fabry, J., & Rosenberg, B. (1982, January). The elusive goal of measuring pilot workload in general aviation. Paper presented at the Workshop on Flight Testing to Identify Pilot Workload and Pilot Dynamics. CA: Edwards Air Force Base.
255. Stein, E. S., & Garland, D. (1993, September). Air traffic controller working memory: Considerations in air traffic control tactical operations (DOT/FAA/CT-TN93/37). Atlantic City, NJ: Federal Aviation Administration Technical Center.
256. Stein, E. S., & Garland, D. (1993). A practical guide for research planning. In D. J. Garland & J. A. Wise (Eds). Human Factors and Advanced Aviation Technologies, Daytona Beach, FL: Embry Riddle Aeronautical University Press.
257. Stein, E. S., & Kobrick, J. L. (1985, January). Simulations: A brief history. Infantry, 75(1), 28-31.
258. Stein, E. S., & Rosenberg, B. (1983, January). The measurement of pilot workload (CT-82-23), Interim Report (EM-81/14). Atlantic City, NJ: Federal Aviation Administration Technical Center. (NTIS No. AD A124 582)
259. Stein, E. S., Rosenberg, B., & Rehmann, J. T. (1982, August). An alternative approach to pilot workload measurement. Paper presented at the Annual Convention of the American Psychological Association, Washington, DC.

260. Stein, E. S., & Wagner, D. (1994). A psychologist's view of validating aviation systems. In J. A. Wise, V. D. Hopkin, & D. J. Garland (Eds.). Human factors certification of advanced aviation technologies, Daytona Beach, FL: Embry Riddle Aeronautical University Press.
261. Sulzer, R. L. (1964, May). Lighting and marking of obstructions to air navigation (RD-64-70) Interim Memorandum Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
262. Sulzer, R. (1968, October). Lighting and marking of obstructions to air navigation (RD-68-38) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center. (NTIS No. AD-676-526)
263. Sulzer, R. L. (1970, April). Analysis of pilot questionnaires - test VASI for long-bodied aircraft (Note 70-1). Atlantic City, NJ: National Aviation Facilities Experimental Center, Human Engineering Technical Support.
264. Sulzer, R. (1981, November). Transport aircraft cockpit standardization (federal aviation regulations part 25), (DOT/FAA/EM-81/11) Final Report. Atlantic City, NJ: Federal Aviation Administration Technical Center.
265. Sulzer, R. L., & Crook, W. G. (1968, November). Evaluation of low-cost collision avoidance ground training equipment (DS-68-22) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center. (NTIS No. AD-680-253)
266. Sulzer, R. L., Crook, W., Rich, P., & Hill, P. (1971, December). Reactions of pilots to warning systems for visual collision avoidance (RD-71-61) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center. (NTIS No. AD-735-141)
267. Sulzer, R., & Karsten, G. (1974, March). Man/machine relationship in national airspace system: Plan view display positioning (RD-74-27) Interim Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.

268. Sulzer, R. L., & Lucas, R. J. (1975, September). Enroute sector redesign (field survey of flight strip data) (RD-75-138) Interim Report, (NA-75-26). Atlantic City, NJ: National Aviation Facilities Experimental Center.
269. Sulzer, R., & Paprocki, T. (1969, March). Flight test and evaluation of heliport lighting for VFR (RD-68-61) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center. (NTIS No. AD-683-680)
270. Sulzer, R. L., & Skelton, G. E. (May 1976). Visual attention of private pilots, the proportion of time devoted to outside the cockpit (RD-76-80) Final Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
271. Sulzer, R. L., & Skelton, G. E. (1971, June). Prevention of aircraft loss of control using a simple head-up display. Atlantic City, NJ: National Aviation Facilities Experimental Center.
272. Talotta, N. J., Shingledecker, C., Kerns, K., & Zurinskas, T. E. (1990, February). Operational evaluation of initial data link air traffic control services, vol. I and II (DOT/FAA/CT/90-1, I and II). Atlantic City, NJ: Federal Aviation Administration Technical Center.
273. Talotta, N. J., Shingledecker, C., Kerns, K., Zurinskas, T. E., & Marek, H. R. (1988, September). Controller evaluation of initial data link air traffic control services: Mini study 1 (DOT/FAA/CT-88/25, 1 and 2). Atlantic City, NJ: Federal Aviation Administration Technical Center.
274. Talotta, N. J., Shingledecker, C., Kerns, K., Zurinskas, T. E., & Marek, H. R. (1989, March). Controller evaluation of initial data link air traffic control services: Mini study 2 (DOT/FAA/CT-89/14, 1 and 2). Atlantic City, NJ: Federal Aviation Administration Technical Center.
275. Talotta, N. J., & Zurinskas, T. E. (1989, Fall). The impact of data link on ATC communications. Proceedings of the 34th Air Traffic Control Association Conference. Arlington, VA: Air Traffic Control Association.

276. Talotta, N. J., & Zurinskas, T. E. (1989, Fall). Operation evaluation of data link ATC initial services. Proceeding of the 34th Air Traffic Control Association Conference. Arlington VA: Air Traffic Control Association.
277. Valez, H., & Stein, E. S. (1993, March). Looking through a second pair of eyes. Air Traffic Management, 2(1), 15.
278. Vaughan, W. S., Luce, T. S., & Kassebaum, R. G. (1962, May). Airport marking and lighting systems: A survey of operational tests and human factors, 1959-1961 (FAA/BRD-401). Arlington, VA: Human Sciences Research, Inc.
279. Vaughan, W. S., Rollins, W. F., & Luce, T. S. (1963, April). Laboratory studies of the ability of observers to perform three visual tasks required of pilots in approach and landing (FAA/BRD-401). McLean, VA: Human Sciences Research, Inc.
280. Vingelis, P. J., Schaeffer, E., Stringer, P., Gromelski, S., & Ahmed, B. (1990, December). Air traffic controller memory enhancement (DOT/FAA/CT-TN90/38). Atlantic City, NJ: Federal Aviation Administration Technical Center, Concepts Analysis Division.
281. Virnelson, T. R., & Vaughan, W. S. (1961, December). Heliport lighting design solutions to pilot information requirements. Arlington, VA: Human Sciences Research, Inc.
282. Willett, F. M., Lewis, W., & Sachko, J. L. (1978, May). Summary of air route traffic control center "e" position design - research phase (NA-78-31) Letter Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.
283. Wise, J. E., & Whittenburg, J. A. (1962, July). Feasibility for research application of visual attachments for dynamic flight simulators, report no. 1: State-of-the-art survey of the visual simulation industry (RD-353) (FAA/BRD-401). Arlington, VA: Human Sciences Research, Inc.
284. Workman, J. D., & Baxter, J. R. (1962, October). The

projected symbolic display: A new approach to aircraft instrumentation (RD-353) Memorandum Report. Atlantic City, NJ: National Aviation Facilities Experimental Center.

285. Zingale, C., Gromelski, S., & Stein, E. S. (1992, September). Preliminary studies of planning and flight strip use as air traffic control memory aids (DOT/FAA/CT-TN92/22). Atlantic City, NJ: Federal Aviation Administration Technical Center.
286. Zingale, C., Gromelski, S., Ahmed, S. B., & Stein, E. S. (1993, June). Influence of individual experience and flight strips on air traffic controller memory/situational awareness (DOT/FAA/CT-TN93/31). Atlantic City, NJ: Federal Aviation Administration Technical Center.
287. Zito, P., Goodwin, J., Hierbaum, F., Massimino, M., & Zurinskas, T. E., (1980, August). Terminal radar approach control (TRACON) facility supervisor desk complex. Proceedings of the 1979 Seminar on Air Traffic Control (FAA-CT-80-170). Atlantic City, NJ: Federal Aviation Administration Technical Center.
288. Zurinskas, T. E. (1972, June). Simulation study of diamond runway marks for aircraft approach guidance (RD-72-57) Interim Report. Atlantic City, NJ: National Aviation Facilities Experimental Center. (NTIS No. AD-744-899)
289. Zurinskas, T. E., (1991, Fall). A view of the future ATC system. Proceedings of the 36th Air Traffic Control Association Conference. Arlington, VA: Air Traffic Control Association.
290. Zurinskas, T. E., & Rosenberg, B. L. (1986). Air traffic controller evaluation of gray, yellow, and present tower cab window shades (Technical Note). Atlantic City, NJ: Federal Aviation Administration Technical Center, ACT-100.

INDEX

AIRCRAFT

COLLISION AVOIDANCE	12 13 16 17 58 67 68 77 108 169 173 215 265 266
DESIGN	150
DISPLAYS	58 67 68 80 81 85 90 149 158 170 173 215 252 266 284
EQUIPMENT	03 04 05 06 07 08 10 15 16 67 68 81 85 93 120 154 175 180 264
HEADS UP	212 271
LANDING LIGHTS	167
NAVIGATION	07 81 154
SIMULATION	07 80 81 83 96 149 174 215 220 253 257 283

AIRCREW

BRIEFING	139 140
DECISION MAKING	171
GENERAL AVIATION	209 223 224 254
HUMAN ERROR	14 17 157 171
IN FLIGHT MEASUREMENT	224
OBSERVERS	177
PILOT REPORTS	76
PERCEPTION	03 04 05 06 07 08 10 11 12 13 16 17 101 168 194 270
PERFORMANCE	02 9 12 13 14 15 16 17 83 171 173 177 182 193 221 222 227
PSYCHOPHYSIOLOGY	181 182 193
TRAINING	265
WORKLOAD	114 170 172 196 236 250 254 258 259 270

AIRPORT

LIGHTING	65 95 103 122 130 131 133 134 135 136 138 151 166 207 261 262 278
NOISE	21 22 23 24 25 26 27 28 29 31 59 97 109 116
SECURITY	86 121 146
SIGNS	91 92 111 122
TAXIWAY MARKING	38 39 111 122 278
VASI	90 152 263
VISUAL DISPLAY	30 37

ATC

ACTIVITY	33 73
ALLOCATION OF FUNCTION	75 233 237 238 282
AUTOMATION	35 50 53 78 79 119 129 178 183 234 238
CONTROLLER ERROR	41 42 43 44 46 47 84 113 157
DATA ENTRY	61 163
DECISION MAKING	48 49 117
FACILITY LIGHTING	142
GENERAL AVIATION	85 209
GRAPHIC SIMULATION	124 125 205 232 235
INFORMATION DISPLAYS	45 62 63 99 126 127 153 155 156 159 162 203 216
MATH MODELS	18 27 56 106 203 216
MEMORY	87 88 98 245 251 255 280 285 286
MMI	50 267
OBSERVERS	40 226 279
OPERATIONS	158 282

ATC CONTINUED

PERCEPTION	11 110 117 194 242 247 248 249
PERFORMANCE	40 41 42 43 44 46 47 51 52 73 74 75 84 98 110 279
PROCEDURES	34 54 74 158
RADAR DISPLAY	01 32 153 155 156 162 267
SECTOR DESIGN	18 70 106 268
SEPARATION	41 42 66 104 105 243 244
SIMULATION	36 37 38 39 41 42 43 44 46 47 66 103 104 105 107 108 160 190 225 226 228 230 239 240 241 243 244 246 285 286
SITUATION AWARENESS	88 89
TRACON	32 35 69 102 208 211 287
TRAINING	71 72
WORKLOAD	18 42 43 44 46 106 137 196 226 228 229 231 246 250

COMMUNICATIONS

DATA LINK	94 206 210 272 273 274 275 276
LANGUAGE	49 94 128 143
VOICE	55 56 93 128 143 148 213
VSCS	147 188 189 198 199 200 201 202

FLIGHT SERVICE

ACTIVITY	112
DEMONSTRATION	145
DISPLAYS	165
EVALUATION	164 165 184 192
MAINTENANCE MONITOR	144

HELICOPTER

HELIPORTS 269 281

HUMAN FACTORS

CHECKLIST 214

EQUIPMENT-
LABORATORY 96 179 197 277

EYE TRACKING 110 277

LABORATORY 82 118

MEASUREMENT 204

PROGRAM 185

RESEARCH
PLANNING 256

IDENTIFICATION BEACONS

AIRCRAFT 167 169

VEHICLE 57

PHYSICS 187

RUNWAY

APPROACH
INFORMATION 14 36 37 38 151 152 263 288

LIGHTING 133 134 135 136 138 166 176 207 208 261 262

MARKING 132 152 288

SEPARATION 39 104 105 115

WARNING 19

SYSTEMS

DESIGN 120 123 127 137 150 157 186 211 214 260 282 287
289

TEST 119 129 260 282

TOWER

CAB	32 33 34 161
DESIGN	33 64 65 69 73 161
EQUIPMENT	100
SITING	191
SIMULATION	100
WINDOWS	65 161 290

WEATHER

FOG	132
MODELS	20
TELEPHONE ANSWERING SERVICE	217 218 219
WEATHER DISPLAYS	19 60 141 195